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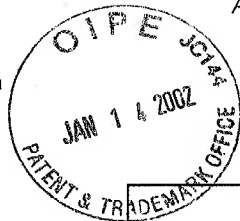
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Steven L. Highlander

December 3, 2001

FILE: UTSB:679USD2

Commissioner for Patents
Washington, DC 20231

RE: SN 09/940,173 INHIBITION OF HUMAN TELOMERASE BY A G-QUADRUPLEX-
INTERACTION COMPOUND - By Sean M. Kerwin et al.

Sir:

Enclosed for filing in the above-referenced patent application is an Information Disclosure Statement and Form PTO-1449.

No fees are believed to be due in connection with the filing of this Information Disclosure Statement, however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to the enclosed materials, the Commissioner is hereby authorized to deduct said fees from Fulbright & Jaworski Deposit Account No.: 50-1212/10107746/SLH.

Please date stamp and return the enclosed postcard evidencing receipt of these materials.

Respectfully submitted,

Steven L. Highlander
Reg. No. 37,642

SLH/cas

Encl: as noted



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Kerwin et al.

Serial No.: 09/940,173

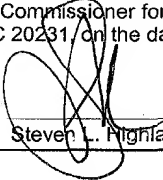
Filed: August 27, 2001

For: INHIBITION OF HUMAN TELOMERASE
BY A G-QUADRUPLEX-INTERACTION
COMPOUND

Group Art Unit: Unknown

Examiner: Unknown

Atty. Dkt. No.: UTSB:679USD2/SLH

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December 3, 2001	
Date	Steven L. Highlander

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56, it is respectfully requested that this Information Disclosure Statement be entered and the documents listed on attached Form PTO-1449 be considered by the Examiner and made of record.

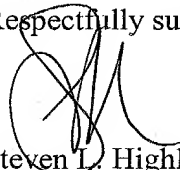
In accordance with 37 C.F.R §§ 1.97(g), (h), this Information Disclosure Statement is not to be construed as a representation that a search has been made, and is not to be construed to be an admission that the information cited is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

The present Information Disclosure Statement is being filed prior to the receipt of a first Official Action reflecting an examination on the merits, and hence is believed to be timely filed in accordance with 37 C.F.R. § 1.97(b). No fees are believed to be due in connection with the filing of this Information Disclosure Statement, however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to these materials, the Commissioner is hereby authorized to deduct said fees from Fulbright & Jaworski Deposit Account No.: 50-1212/10107746/SLH.

This application is a divisional application of Serial No. 09/244,675, filed February 4, 1999 and is relied upon for an earlier filing date under 35 U.S.C. § 120. In accordance with Rule 37 C.F.R. § 1.98(d) copies of the listed documents are not enclosed as they have been previously cited by or submitted to the Patent and Trademark Office in prior application Serial No. 09/244,675.

Applicants respectfully request that the listed documents be made of record in the present case.

Respectfully submitted,

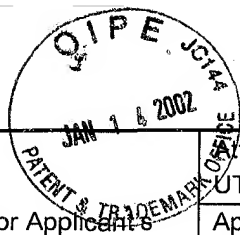


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Date:

December 3, 2001

**Form PTO-1449** (modified)

List of Patents and Publications for Applicants

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

Atty. Docket No.

UTSB:679USD2/SLH

Serial No.

09/940,173

Applicants

Sean M. Kerwin, Oleg Y. Fedoroff, Miguel Salazar and
Laurence H. Hurley

Filing Date:

August 27, 2001

Group:

Unknown

U.S. Patent Documents

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Foreign Patent Documents

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Other Art

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U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date if App.

Foreign Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C1	Agbandje <i>et al.</i> , "Anthracene-9,10-diones as potential anticancer agents. Synthesis, DNA binding, and biological studies on a series of 2,6-disubstituted derivatives," <i>Med. Chem.</i> , 35:1418-1429, 1992.
	C2	Broccoli <i>et al.</i> , "Telomerase activity in normal and malignant hematopoietic cells," <i>Proc. Natl. Acad. Sci. U.S.A.</i> , 92:9082-9086, 1995.
	C3	Chen <i>et al.</i> , "Spectroscopic recognition of guanine dimeric hairpin quadruplexes by a carbocyanine dye," <i>Proc. Natl. Acad. Sci. U.S.A.</i> , 93:2635-2639, 1996.
	C4	Chung <i>et al.</i> , "p-Quinone methides as geometric analogues of quinolone carboxylate antibacterials," <i>Bioorganic & Medicinal Chem. Letters</i> , 6(12):1309-1312, 1996.
	C5	Collier <i>et al.</i> , "Synthesis, molecular modeling, DNA binding, and antitumor properties of some substituted amidoanthraquinones," <i>Med. Chem.</i> , 31:847-857, 1988
	C6	Ebisuno <i>et al.</i> , "The cytotoxic effects of fleroxacin and ciprofloxacin on transitional cell carcinoma in vitro," <i>Cancer</i> , 80(12):2263-2267, 1997.
	C7	Fedoroff <i>et al.</i> , "NMR-based model of a telomerase-inhibiting compound bound to G-quadruplex DNA," <i>Biochemistry</i> , 37(36):12367-12374, 1998.
	C8	Fox <i>et al.</i> , "A molecular anchor for stabilizing triple-helical DNA," <i>Proc. Natl. Acad. Sci. U.S.A.</i> , 92:7887-7891, 1995.

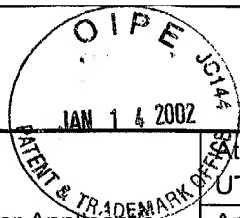
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Information Disclosure Statement — PTO-1449 (Modified)

A: 202817()

**Form PTO-1449** (modified)

List of Patents and Publications for Applicants

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

Applicant's Docket No.

UTSB:679USD2/SLH

Serial No.

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Applicants

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U.S. Patent Documents

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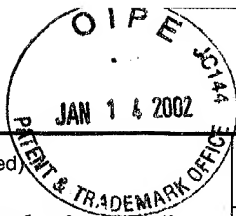
Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date if App.
	C9	Greider <i>et al.</i> , "Identification of a specific telomere terminal transferase activity in Tetrahymena extracts," <i>Cell</i> , 43(2Pt1):405-413, 1995.					
	C10	Haq <i>et al.</i> , "Molecular anchoring of duplex and triplex DNA by disubstituted anthracene-9/10-diones: calorimetric, UV melting, and competition dialysis studies," <i>J. Am. Chem. Soc.</i> , 118:10693-10701, 1996.					
	C11	Hertzberg and Johnson, "Antineoplastic Agents," <i>In: Annual Reports in Medicinal Chemistry</i> , Plattner (ed.) 18:167-176, 1993.					
	C12	Hsiung <i>et al.</i> , "A mutation in yeast <i>TOP2</i> homologous to a quinolone-resistant mutation in bacteria," <i>The J. of Biol. Chem.</i> , 270(35):20359-20364, 1995.					
	C13	Izbicka <i>et al.</i> , "Effects of cationic porphyrins as G-quadruplex interactive agents in human tumor cells," <i>Cancer Res</i> , 59(3):639-644, 1999.					
	C14	Khac and Moreau, "Interactions between fluoroquinolones, Mg ²⁺ , DNA and DNA gyrase, studied by phase partitioning in an aqueous two-phase system and by affinity chromatography," <i>J. of Chromatography A</i> , 668:241-247, 1994.					
	C15	Kim <i>et al.</i> , "Specific association of human telomerase activity with immortal cells and cancer," <i>Science</i> , 266:2011-2015, 1994.					
	C16	Laughlan <i>et al.</i> , "The high-resolution crystal structure of a parallel-stranded guanine tetraplex," <i>Science</i> , 265:520-524, 1994.					
	C17	Lecomte <i>et al.</i> , "NMR investigation of pefloxacin-cation-DNA interactions: the essential role of Mg ²⁺ ," <i>Intl. J. of Pharmaceutics</i> , 164:57-65, 1998.					
	C18	Lecomte and Chenon, "NMR investigation of pefloxacin/cation/DNA interactions. Mg ²⁺ and Ca ²⁺ Binding," <i>Intl. J. of Pharmaceutics</i> , 139:105-112, 1996.					
	C19	Lecomte <i>et al.</i> , "Effect of magnesium complexation by fluoroquinolones on their antibacterial properties," <i>Antimicrobial Agents and Chemotherapy</i> , 38(12):2810-2816, 1994.					
	C20	Lecomte <i>et al.</i> , "NMR investigation of pefloxacin-cation-DNA interactions," 1995.					
	C21	Llorente <i>et al.</i> , "Using SAR and QSAR analysis to model the activity and structure of the quinolone-DNA complex," <i>Bioorganic & Medicinal Chem.</i> , 4(1):61-71, 1996.					

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Information Disclosure Statement — PTO-1449 (Modified)

**Form PTO-1449** (modified)

List of Patents and Publications for Applicant's

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Atty. Docket No.
UTSB:679USD2/SLHSerial No.
09/940,173Applicants
Sean M. Kerwin, Oleg Y. Fedoroff, Miguel Salazar and
Laurence H. HurleyFiling Date:
August 27, 2001Group:
UnknownU.S. Patent Documents
See Page 1Foreign Patent Documents
See Page 1Other Art
See Page 1**U.S. Patent Documents**

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date if App.
	C22	Martinez <i>et al.</i> , "Effect of magnesium and calcium complexation on the photochemical properties of norfloxacin," <i>Photochemistry and Photobiology</i> , 64(6):911-917, 1996.					
	C23	Norton <i>et al.</i> , "Inhibition of human telomerase activity by peptide nucleic acids," <i>Nature Biotechnology</i> , 14:615-619, 1996.					
	C24	Palmer <i>et al.</i> , "Potential antitumor agents. 54. Chromophore requirements for in vivo antitumor activity among the general class of linear tricyclic carboxamides," <i>J. Med. Chem.</i> , 31:707-712, 1988.					
	C25	Parkinson, "Do telomerase antagonists represent a novel anti-cancer strategy?" <i>Brit. J. Cancer</i> , 73:1-4, 1996.					
	C26	Perry <i>et al.</i> , "1,4- and 2,6-disubstituted amidoanthracene-9,10-dione derivatives as inhibitors of human telomerase," <i>J Med. Chem.</i> , 41(17):3252-3260, 1998.					
	C27	Perry <i>et al.</i> , "Human telomerase inhibition by regioisomeric disubstituted amidoanthracene-9,10-diones," ABSTRACT, <i>J. Med. Chem.</i> , 41(24):4873-4884, 1998.					
	C28	Rodighiero <i>et al.</i> , "Angular furoquinolinones, psoralen analogs: novel antiproliferative agents for skin diseases. Synthesis, biological activity, mechanism of action, and computer-aided studies," <i>J. Med. Chem.</i> , 39:1293-1302, 1996.					
	C29	Ross and Riley, "Physicochemical properties of the fluoroquinolone antimicrobials. III. Complexation of lomefloxacin with various metal ions and the effect of metal ion complexation on aqueous solubility," <i>Intl. J. of Pharmaceutics</i> , 87:203-213, 1992.					
	C30	Ross and Riley, "Physicochemical properties of the fluoroquinolone antimicrobials. II. Acid ionization constants and their relationship to structure," <i>Intl. J. of Pharmaceutics</i> , 83:267-272, 1992.					
	C31	Salazar <i>et al.</i> , "Thermally induced DNA:RNA hybrid to G-quadruplex transitions: possible implications for telomere synthesis by telomerase," <i>Biochemistry</i> , 35:16110-16115, 1996					
	C32	Sen and Gilbert, "A sodium-potassium switch in the formation of four-stranded G4-DNA," <i>Nature</i> , 344(6265):410-414, 1990.					
	C33	Sun <i>et al.</i> , "Inhibition of human telomerase by a G-quadruplex-interactive compound," <i>J. Med. Chem.</i> , 40(14):2113-2116, 1997.					

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Information Disclosure Statement — PTO-1449 (Modified)

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U.S. Patent Documents <i>See Page 1</i>		Foreign Patent Documents <i>See Page 1</i>		Other Art <i>See Page 1</i>	
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U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date if App.
	C34	Tanious <i>et al.</i> , "Substituent position dictates the intercalative DNA-binding mode for anthracene-9,10-dione antitumor drugs," <i>Biochemistry</i> , 31:11632-11640, 1992.					
	C35	Wang <i>et al.</i> , "Guanine residues in d(T ₂ AG ₃) and d(T ₂ G ₄) form parallel-stranded potassium cation stabilized G-quadruplexes with anti glycosidic torsion angles in solution," <i>Biochemistry</i> , 31:8112-8119, 1992.					
	C36	Weitzmann <i>et al.</i> , "The development and use of a DNA polymerase arrest assay for the evaluation of parameters affecting intrastrand tetraplex formation," <i>J. Biol. Chem.</i> , 271(34), 20958-20964, 1996.					
	C37	Wentland <i>et al.</i> , "Mammalian topoisomerase II inhibitory activity of 1-cyclopropyl-6,8-difluoro-1,4-dihydro-7-(2,6-dimethyl-4-pyridinyl)-4-oxo-3-quinolinecarboxylic acid and related derivatives," <i>J. Med. Chem.</i> , 36:2801-2809, 1993.					
	C38	Yamakuchi <i>et al.</i> , "New quinolones, ofloxacin and levofloxacin, inhibit telomerase activity in transitional cell carcinoma cell lines," ABSTRACT, <i>Cancer Letters</i> , 119(2):213-219, 1997.					
	C39	Zahler <i>et al.</i> , "Inhibition of telomerase by G-quartet DNA structures," <i>Nature</i> , 350:718-720, 1991.					
	C40	Grootenhuis <i>et al.</i> , "Finding potential DNA-binding compounds by using molecular shape," ABSTRACT, <i>J. Comput. Aided Mol. Des.</i> , 8(6):731-750, Dec, 1994.					
	C41	Kaufman and Hancock, "Topoisomerase II as a target for anticancer chemotherapy," ABSTRACT, <i>Acta Biochem. Pol.</i> , 42(4):381-393, 1995					

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